Amendments for a Low Budget Athletic Field

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A study has begun at the Hancock Turfgrass Research Center on the campus of Michigan State University to investigate the possibilities of maintaining a high quality athletic field while operating within a low budget. This study is being conducted to provide information to budget decision makers as to how resources relate to improved athletic field quality. The motivation for this study comes from the number of athletic injuries induced by poor field conditions (Harper et al., 1984). Because of the fixed budget high schools are often forced to operate within, it is thought that they cannot afford the machinery, products, and staff required for a high maintenance field and it is questioned where to invest their resources. As a result, it is assumed that they are incapable of maintaining a high quality, safe athletic field. However, as we have seen so many times in the past, more is not always better. Therefore, Michigan State University is conducting a study to discover the potential of minimum inputs combined in such a way so as to maintain a quality athletic field while still operating within a low budget.
The objectives of this study are to demonstrate the differences in field quality based on cultural inputs and to relate the inputs to maximizing events. The study is a three factor design with mowing, fertility, and cultivation as variables. It is being conducted on both a sand-based rootzone and a native soil field. Fertilizer will be applied at levels of 4 lb N/1000 ft^2 four times per year, 4 lb N/1000 ft^2 eight times per year, or 6 lb N/1000ft^2 six times per year. Mowing will be done once or twice per week and cultivation will be done none or twice per year. Different combinations of each treatment will be applied. In addition, half of the treatments will receive a traffic application of approximately twenty-five games per year. Establishment of the plots was begun in the spring of 1999. Treatments were begun in the fall of 1999 and are expected to continue through the summer of 2001.